

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Syn Strand

South Carolina Manufacturing Extension Partnership

Syn Strand Goes Lean to Increase Capacity and Improve Quality

Client Profile:

Syn Strand, Inc, provides technical monofilament solutions to Voith Paper Fabrics exclusively for paper machine clothing and additional monofilament products externally to other industrialized end-use customers. The company is a global supplier of monofilaments for the manufacture of forming, press and dryer fabrics. The group also supplies yarns used in the chemical, textile and automotive industry. Established in 1987, Syn Strand employs 100 people at its facility in Summerville, South Carolina.

Situation:

Syn Strand wanted to improve their competitive position. Some of their concerns included insufficient and incomplete order entry, Improved product realization flow, established systems with measurable inputs, the need to process orders within 72 hours after receipt, increased capacity for meeting production schedules, and quality issues. Changeovers took 3 hours for a simple changeover and up to 12 hours for a major changeover involving an equipment change. Machine changeovers were tracked manually. The plant did not track machine utilization or efficiency, and the most common reason for missing ship dates was machine capacity constraints. The company contacted the South Carolina Manufacturing Extension Partnership (SCMEP), a NIST MEP network affiliate, for help.

Solution:

SCMEP recommended that Syn Strand maintain its continuous improvement initiatives in the area of extruder changeover time reduction. At the time of the assessment, it took up to 4 hours to complete a full changeover on an extruder, and a high level of scrap was created. A current Six Sigma Greenbelt study focuses on these changeovers. SCMEP also recommended that key Syn Strand individuals be trained in the theory and application of Single Minute Exchange of Dies (SMED) to increase production, enhance manufacturing flexibility and reactivity, and reduce scrap created during changeovers. Another SCMEP recommendation was that Syn Strand utilize a Lean expert to Value Stream Map the up-front process to assist in developing an implementation master plan. Projects initiated to achieve this transformation included training in Lean 101, Value Stream Mapping, and a 5S Kaizen event.

With SCMEP's assistance and hands-on support, Syn Strand began implementing a 5S program. The company established a staging area downstairs and only placed materials ready to be run on the mezzanine. Appropriate pellets were placed beside each different extrusion line; excess parts and raw materials were removed. The time savings produced by these changes resulted in lead time reductions and increased throughput. Similar results were obtained by reorganizing storeroom setups in which maintenance parts were separated from regular, consumable and production parts.

Results:

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- * Increased sales by \$500,000.
- * Realized \$30,000 in cost savings.
- * Reduced changeover time by 12 percent, or \$40,000.
- * Increased throughput by 15,000 pounds monthly.
- * Reduced travel time by 97 percent.

Testimonial:

"SCMEP's impact at our facility has been to solidify our continuous improvement pro-gram and provide the structure necessary to keep it on track. They were the ones to jumpstart our quality management improvement initiative. One major difference I've noticed is in the way that our company culture has changed to one with a quality focus. Thanks to SCMEP, Syn Strand is committed and ready to deliver leading technologies and value to our customers."

Bart Burford, Operations Manager